

Amendments to the Claims

Please cancel claim 51 without prejudice to or disclaimer of the subject matter recited therein.

Please AMEND claims 26, 27, 30, 37-41, 43, 49, 50, and 52 as follows. Note that all of the claims currently pending in this application, including those not currently being amended, are reproduced below in accordance with U.S. Patent and Trademark Office practice.

26. (Currently Amended) A method of conveying particulate material containing reaction products of a high pressure reactor, from a supply vessel at a high pressure to a receiving vessel at a considerably lower pressure, said method comprising the steps of:

(a) providing a supply vessel that discharges particulate material supplied by a high pressure reactor;

(b) providing a collecting vessel that (i) collects the particulate material discharged from the supply vessel and selectively discharges the particulate material; ~~;(ii) pressure controls the collected particulate material using means for controlling the pressure of the collected particulate material, and (iii) discharges the pressure-controlled particulate material;~~

(c) providing a receiving vessel that receives ~~pressure-controlled~~ the particulate material ~~directly~~ discharged from the collecting vessel;

(d) pneumatically conveying the particulate material discharged from the supply vessel, via a conveyor line, to the collecting vessel using a gas exiting the reactor as a carrier gas ~~and controlling the discharge rate of the carrier gas to control the pressure in the collecting vessel and the flow rate of the particulate material in the conveyor line, the particulate material being~~

conveyed from the supply vessel to the collecting vessel at essentially at the same pressure as is prevailing in the supply vessel;

(e) discharging the carrier gas from the collecting vessel through a discharge conduit;

~~(e) — controlling the pressure of the material collected in the collecting vessel; and~~

(f) controlling the rate at which the carrier gas is discharged from the collecting vessel to control the flow rate of the particulate material in the conveyor line;

(g) further controlling the rate at which the carrier gas is discharged from the collecting vessel to control the pressure in the collecting vessel; and

(h) ~~(f)~~ conveying the particulate material directly from the collecting vessel to the receiving vessel at essentially the same pressure as is prevailing in the receiving vessel.

27. (Currently Amended) A method according to claim 26, further comprising performing step (d) by conveying the particulate material as a dense suspension, the flow rate of the carrier gas in the conveyor line being less than 5 m/s and the pressure drop being 0.1 - 1.0 bar.

28. (Previously Presented) A method according to claim 26, wherein the temperature of the particulate material in the supply vessel is 400 - 1200 °C and further comprising providing the conveyor line with heat exchange surfaces, by which the temperature of the particulate material in step (d) is reduced to less than 300 °C.

29. (Previously Presented) A method according to claim 28, further comprising fluidizing the particulate material in the supply vessel by air that is mixed in the carrier gas, thus decreasing the dew point of the carrier gas.

30. (Currently Amended) A method according to claim 26, further comprising arranging a filter in the discharge conduit ~~for the carrier gas~~, wherein ~~the means to control the flow rate of the gas includes~~ controlling the rate at which the carrier gas is discharged from the collecting vessel in steps (f) and (g) is performed by a control valve downstream from the filter, and, ~~discharging~~ in step ~~(d)~~ (e), the carrier gas is discharged from the collecting vessel to a space ~~at a pressure which is essentially the same that is at essentially the same pressure~~ as is prevailing in the receiving vessel.

31. (Withdrawn) A method according to claim 26, further comprising discharging the carrier gas from the collecting vessel to the receiving vessel in step (d).

32. (Withdrawn) A method according to claim 31, further comprising providing more than one parallel line for the discharge of the carrier gas between the collecting vessel and the receiving vessel, which lines are provided with a constantly open flow restricting element and a shut-off valve, and performing the control of the discharge velocity by opening and shutting the shut-off valves.

33. (Withdrawn) A method according to claim 32, wherein the flow restricting elements are easily changeable.

34. (Withdrawn) A method according to claim 30, wherein the collecting vessel has an elongated form and is arranged in a vertical orientation, and further comprising maintaining a column of particulate material in the collecting vessel, and attaching the discharge conduit for carrier gas to the collecting vessel at the bottom section of the particulate material column.

35. (Withdrawn) A method according to claim 34, further comprising providing more than one discharge conduit for the carrier gas, the discharge conduits being attached to the collecting vessel at various levels of the particulate material column.

36. (Withdrawn) A method according to claim 34, further comprising maintaining the pressure in the bottom section of the particulate material column to be approximately the same as is prevailing in the receiving vessel and practicing step (f) intermittently or continuously from the bottom section of the collecting vessel.

37. (Currently Amended) A method of conveying particulate material according to claim 26, further comprising disposing a gas tight inlet valve in the conveyor line before the collecting vessel and a gas tight discharge valve between the collecting vessel and the receiving vessel, and practicing steps (d) - ~~(h)~~ ~~(f)~~ in ~~alteration~~ alternation, wherein steps ~~(c)~~ and ~~(f)~~ (f), (g), and (h) further comprise the sub-steps of:

(f1) ~~(e1)~~ stopping the discharge of the carrier gas from the collecting vessel ~~by using the means to control the carrier gas flow~~, whereby the conveyance of the particulate material is stopped;

(g1) ~~(e2)~~ closing the inlet ~~shut-off~~ valve before the collecting vessel;

(g2) ~~(e3)~~ ~~allowing the discharge of~~ discharging the carrier gas from the collecting vessel until the pressure in the collecting vessel has dropped to essentially the same pressure as is prevailing in the receiving vessel; ~~approximately to the same level as the pressure of the receiving vessel~~;

(h1) ~~(f1)~~ opening the discharge valve and conveying the particulate material from the collecting vessel to the receiving vessel; and

(h2) ~~(f2)~~ closing the discharge valve, opening the inlet valve, and returning to step (d) .

38. (Currently Amended) A method according to claim 26, further comprising disposing the collecting vessel above the receiving vessel and, in step (h) ~~(f)~~, allowing the particulate material to fall down into ~~to~~ the receiving vessel.

39. (Currently Amended) A method according to claim 26, further comprising in step (f) ~~(d)~~, periodically changing the flow rate of the particulate material in the conveyor line ~~carrier gas~~ by stopping the conveyance for a predetermined period of time at regular intervals or when the pressure in the collecting vessel or the temperature of the particulate material entering the collecting vessel is not within predetermined limits.

40. (Currently Amended) An apparatus for conveying particulate material containing reaction products of a high pressure reactor from a supply vessel at a high pressure to a receiving vessel at a considerably lower pressure, said apparatus comprising:

a supply vessel that discharges particulate material supplied by a high pressure reactor;

a collecting vessel that (i) collects the particulate material discharged from the supply vessel and selectively discharges the particulate material; ~~;(ii) pressure-controls the collected particulate material using means for controlling the pressure of the collected particulate material;~~ and (iii) ~~discharges the pressure-controlled particulate material;~~

a receiving vessel that receives ~~pressure-controlled~~ the particulate material ~~directly discharged from the collecting vessel;~~

a conveyor line that pneumatically conveys the particulate material discharged from the supply vessel to the collecting vessel using a gas exiting the high pressure reactor as a carrier gas; ~~the conveyor line controlling a discharge rate of the carrier gas, thereby controlling the pressure in the collecting vessel and the flow rate of the particulate material in the conveyor line; and~~

a discharge conduit for discharging the carrier gas from the collecting vessel;

means for controlling the rate at which the carrier gas is discharged from the collecting vessel to control the flow rate of the particulate material in the conveyor line and to control the pressure in the collecting vessel; and

means for conveying the ~~pressure-controlled~~ particulate material ~~discharged~~ directly from the collecting vessel ~~directly~~ to the receiving vessel, ~~the pressure-controlled particulate material having a pressure that is~~ at essentially the same as a pressure as is prevailing in the receiving vessel;

~~the collecting vessel further including a discharge conduit for discharging the carrier gas and means for controlling the discharge velocity of the carrier gas.~~

41. (Currently Amended) An apparatus according to claim 40, further comprising heat exchange surfaces disposed along in the conveyor line.

42. (Previously Presented) An apparatus according to claim 41, further comprising elements, disposed in the supply vessel, for fluidizing the particulate material in the supply vessel in such a way that air used for the fluidization is mixed in the carrier gas, thus decreasing the dew point of the carrier gas.

43. (Currently Amended) An apparatus according to claim 40, further comprising a filter disposed in the discharge conduit ~~for the carrier gas~~, wherein the means ~~to control~~ for controlling the flow rate at which ~~of~~ the carrier gas is discharged from the collecting vessel includes a control valve arranged downstream from the filter, and the discharge conduit ~~for the carrier gas~~ is in flow communication with the open air.

44. (Withdrawn) An apparatus according to claim 40, wherein a discharge conduit for the carrier gas is in flow communication with the receiving vessel.
45. (Withdrawn) An apparatus according to claim 44, further comprising more than one parallel line for the discharge of the carrier gas provided between the collecting vessel and the receiving vessel, which lines are provided with a constantly open flow restricting element and a shut-off valve.
46. (Withdrawn) An apparatus according to claim 45, wherein the flow restricting elements are easily changeable.
47. (Withdrawn) An apparatus according to claim 40, wherein the collecting vessel has an elongated form and is disposed in a vertical orientation, and the discharge conduit for the carrier gas is attached to a bottom section of the collecting vessel.
48. (Withdrawn) An apparatus according to claim 47, further comprising more than one discharge conduit for the carrier gas, which are attached to the collecting vessel at various levels.
49. (Currently Amended) An apparatus according to claim 40, further comprising a gas tight inlet valve disposed in the conveyor line before the collecting vessel and a gas tight discharge valve disposed between the collecting vessel and the receiving vessel.

50. (Currently Amended) An apparatus according to claim 40, wherein the collecting vessel is disposed above the receiving vessel and further comprising a valve arranged between the vessels, through which valve the particulate material may fall down into ~~to~~ the receiving vessel.

51. (Cancelled)

52. (Currently Amended) An apparatus according to claim 41, wherein the heat exchange surfaces reduce the temperature of the particulate material conveyed through the conveyor line to a temperature of less than 300 °C.

53. (Previously Presented) A method according to claim 26, wherein the supply vessel is at a pressure of at least two bar.

54. (Previously Presented) An apparatus according to claim 40, wherein the supply vessel is at a pressure of at least two bar.